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Drape product for surgical interventions

TECHNICAL FIELD

The present invention relates to a drape product for surgical interventions, comprising an opening intended to be arranged around an operating site on a patient, which drape product, during use, forms a barrier between the operating site and that part of the patient's body lying outside the operating site.

BACKGROUND TO THE INVENTION

In certain surgical interventions, e.g. gynecological interventions, such as prolapse operations, the surgeon moves the external labia aside and secures them in this position with sutures. The sutures are secured either in the patient or in the drape product which surrounds the operating site. Both these solutions have disadvantages of different types. If the sutures are secured in the patient, this causes the patient pain and discomfort after the operation, and this can turn out to be more problematic than the sequelae of the actual surgical intervention. If the sutures are secured instead in the drape product, the barrier which the drape product forms between the operating site and that part of the patient's body lying outside the operatiing site is broken. This barrier is intended on the one hand to ensure that bacteria and the like from the patient's body do not contaminate the operating site, and to ensure that blood, bacteria and such like from the operating site do not reach the parts of the patient's body lying outside the operating site and do not contaminate the operating table and other operating equipment. Here, drape product signifies surgical sheets, systems of surgical sheets or the like.

The present invention aims to overcome these disadvantages.

DISCLOSURE OF THE INVENTION

According to the invention, this object is achieved by means of a drape product for surgical interventions, comprising an opening intended to be arranged around an operating site on a patient, which drape product, during use, forms a barrier between the operating site and that part of a patient's body lying outside the operating site, characterized in that the drape product comprises at least one member for receiving and/or securing sutures or the like, through which member a suture or the like can be passed without damaging or destroying the barrier between the operating site (O) and that part of a patient's body lying outside the operating site.

In a preferred embodiment, members for receiving and/or securing sutures or the like are arranged on at least two sides of the opening of the product in such a way that the flow of fluid from the operating site is not impeded by these members. Each member is situated at a distance of 15 - 150 mm from the nearest edge of the opening of the product.

In an advantageous variant, the drape product consists of a surgical sheet for gynecological operations with an operation opening which, during use of the sheet, has an upper edge, a lower edge, and two opposite side edges, and members for receiving and/or securing sutures or the like are arranged on both sides of the operation opening. In this variant, the members for receiving and/or securing sutures or the like consist of upwardly projecting folds in the product.

The members for receiving and/or securing sutures or the like can alternatively consist of separate material sections secured to the top face of the product. The material sections can consist of textile material,

nonwoven fabric, plastic film, foam material or hook-and-loop material (Velcro®).

In another embodiment, a row of separate material sections extends parallel to at least one edge of the opening of the product, and the intermediate spaces between the material sections in the row allow fluid to flow past the row of material sections.

DESCRIPTION OF THE FIGURES

The invention will now be described with reference to the attached figures, in which:

Fig. 1 shows a diagrammatic plan view, from above, of a gynecological sheet according to a first embodiment of the invention,

Fig. 2 shows a transverse section along the line II-II in Figure 1,

Figure 3 shows, in a similar view to Figure 2, a member for receiving and/or securing sutures according to a second embodiment of the invention, and

Fig. 4 shows diagrammatically a drape system comprising four surgical drapes which are arranged around an operation opening and are provided with members for receiving and/or securing sutures according to a third embodiment of the invention.

DESCRIPTION OF EMBODIMENTS

Figures 1 and 2 show diagrammatic views of a surgical sheet 1 for gynecological operations according to a preferred embodiment of the invention. The sheet 1 comprises an intermediate plastic layer 3, for example of polyethylene, which ensures the sheet's barrier effect, and an upper layer 4 of absorbent material, for

example nonwoven. The sheet 1 can also have a lower comfort-enhancing layer 2 which can consist of cellulose or nonwoven fabric. The sheet also has an operation opening O and a pouch 5 for collecting fluid running from the operating site. The operation opening has an upper edge 6, a lower edge 7, which during use of the sheet is located at a lower level than the upper edge 6, and two side edges 8, 9.

The sheet 1 also has two upwardly projecting folds 10, 11 which extend along the side edges 8, 9 on both sides of the opening O. As can be seen from Figure 2, the insides of those parts of the sheet 1 forming the fold 11 are connected to one another by means of a tape 12 provided with adhesive layers 13, 14 on both sides. Inside the area for the double-sided adhesive tape 12, a needle can be passed through the fold 11 without the hole formed in the fold damaging or destroying the sterile barrier which the sheet 1 forms between the operating site O and that part of the patient's body lying outside the operating site. For this reason, it is important that the insides of the fold are connected to one another along the whole length of the fold and the tape 12 extends uninterruptedly along the full length of the fold. It should be noted here that, at the transitions between the ends of the fold and outside plane areas of the sheet, said sheet will have upwardly projecting parts through which needles cannot be passed without damaging or destroying the barrier effect of the sheet. Moreover, the optional comfort-enhancing layer 2 will not extend into the area of the folds.

The folds 10, 11 are preferably placed at a distance of 15 - 150 mm from the respective side edge 8, 9 and thus they lie to a large extent outside the natural passage of the flow of fluid from the operating site O.

The insides of the fold can of course be connected to

one another in another way than by means of double-sided adhesive tape, for example by means of an adhesive layer or a thermal weld connection.

The invention can of course also be applied to drape products of another structure or type than the gynecological sheet described here, for example for two-layer or one-layer surgical sheets or drapes and for sheets intended for other types of operations, for example operations on the head.

Figure 3 shows a second embodiment of a sheet comprising members for receiving and/or securing sutures or the like. This embodiment differs from the embodiment in Figure and 2 simply by the fact that these members consist of separate elongate material sections 15 secured to the sheet 1' by means of an adhesive layer 16, these having the same extent as the members 10, 11 in Figure 1. Other components of the sheet 1' are identical to corresponding components of the sheet 1 in the embodiment according to Figures 1 and 2 and have been given the same reference numbers with addition of a prime sign. The material section 15 will consist of material which it is easy to sew in, and can for example consist of textile material, nonwoven fabric, plastic material, foamed plastic or so-called hook-and-loop material.

Figure 4 shows a third embodiment of the invention. In this embodiment, four surgical sheets 17-20 are placed on a patient so that an operation opening O is formed. Extending along the edge of each sheet 17-20 forming an edge of the operation opening O, there is a row 21, 22, 23, 24 of separate, individual material sections 25 at a distance of 15 - 150 mm from the edge. The material sections 25 are made of material which it is easy to sew in, and can consist of the same material as the material section 15 in the second embodiment. By virtue of the fact that there are spaces between the material

sections, fluid can flow freely from the operating site O without being impeded by the rows of members 25 for receiving and/or securing sutures, irrespective of the direction of flow of the fluid. The members 15 according to the second embodiment can of course be replaced by rows of members 25. It is also conceivable to arrange rows of folds along an edge of the operation opening, but this is not preferred.

To make it easier to insert a needle and secure a suture or the like, the folds 10, 11 expediently have a height which is greater than 15 mm and the material sections expediently have a minimum height of 5 mm and a minimum securing length of 10 mm. Securing length here means the maximum value of the height or width of the material section. Such dimensioning ensures that the surgeon has access to a horizontal or vertical sewing surface with sufficient area for a suture to be easily secured in the material section, without risk of the needle making a hole on the drape material on which the material sections are secured.

The embodiments described above can of course be modified within the scope of the invention. For example, the folds 10, 11 can be formed in some other way, for example folded in two to make them stiffer, which can be desirable if one wishes to prevent their being folded in towards the plane of the drape by the tension in sutures secured to them. Moreover, the members for receiving and/or securing sutures do not need to extend in a straight line or parallel to the edges of the operation opening. For example, a stiffening effect can be obtained by elongate members being routed in a sinusoidal or zigzag shape. The invention will therefore only be limited by the content of the attached patent claims.